Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Amendment of the Commission's Rules to	)	
Establish Part 27, the Wireless	)	GN Docket No. 96-228
Communications Service ("WCS")	)	

NOTICE OF PROPOSED RULE MAKING

Adopted: November 8, 1996 ; Released: November 12, 1996

Comment Date: December 4, 1996
Reply Comment Date: December 16, 1996

By the Commission: Commissioner Quello issuing a statement.

TABLE OF CONTENTS

I. INTRODUCTION

1. By this action, we propose to establish a new Wireless Communications Service ("WCS") in the 2305-2320 and 2345-2360 MHz bands. We also propose to award one or more WCS licenses by competitive bidding using multiple round electronic auction procedures. We further propose to permit the WCS licensee to provide any fixed,[1] mobile,[2] radiolocation[3] services,

[1] The fixed service is a radiocommunication service between fixed points. A radiocommunication service is a service involving the transmission, emission and/or reception of radio waves for specific telecommunication purposes. (In the International Telecommunication Union ("ITU") *Radio Regulations*, unless otherwise stated, any radiocommunication service relates to terrestrial radiocommunication, which is any radiocommunication other than space radiocommunication or radio astronomy.) An emission is radiation produced, or the production of radiation, by a radio transmitting station. (For example, the energy radiated by the local oscillator of a radio receiver would not be an emission but a radiation.) Telecommunications is any transmission, emission or reception of signs, signals, writing, images and sounds or intelligence of any nature by wire, radio, optical or other electromagnetic systems. *See* ITU *Radio Regulations*, Edition of 1990, Revised in 1994, at pages RR1-2, RR1-4 and RR1-20.

[2] The mobile service is a radiocommunication service between mobile and land stations, or between mobile stations. A mobile station is a station in the mobile service intended to be used while in motion or during halts at unspecified points. A land station is a station in the mobile service not intended to be used while in motion. *Id.* at pages RR1-5 and RR1-11.

[3] The radiolocation service is a radiodetermination service for the purpose of radiolocation. Radiolocation is radiodetermination used for purposes other than those of radionavigation. Radiodetermination is the determination of the position, velocity and/or other characteristics of an object, or the obtaining of information relating to these parameters, by means of the propagation properties of radio waves. *Id.* at pages RR1-2 and RR1-8.

or satellite Digital Audio Radio Services ("satellite DARS"),[4] consistent with the international *Radio Regulations*.[5] Finally, we propose to establish service and technical rules to ensure that harmful interference is not caused to other radio services. We believe that these proposals will enable WCS licensees to use their spectrum in the most technically and economically efficient manner practicable. This action is being taken pursuant to the Omnibus Consolidated Appropriations Act, 1997 ("Appropriations Act").[6]

II. BACKGROUND

A. Appropriations Act

2. The Appropriations Act requires the Commission to reallocate the frequencies at 2305-2320 and 2345-2360 MHz to wireless services that are consistent with international agreements concerning spectrum allocations, and to assign the use of such frequencies by competitive bidding pursuant to Section 309(j) of the Communications Act of 1934 ("Communications Act").[7] In addition, the Appropriations Act requires that the Commission, in making these bands of frequencies available for competitive bidding, seek to promote the most efficient use of the spectrum, and take into account the needs of public safety radio services. The Appropriations Act also requires that the Commission commence the competitive bidding process for the assignment of the frequencies made available by this action no later than April 15, 1997. Finally, the Appropriations Act requires the Commission to conduct the competitive bidding for these frequencies in a manner that ensures that all proceeds of the bidding are deposited in accordance with Section 309(j)(8) of the Communications Act, not later than September 30, 1997.

3. In order to make this spectrum available for licensing quickly, the Appropriations Act grants the Commission permission to use expedited administrative procedures. Specifically, the Appropriations Act states that rules governing the frequencies made available by this proceeding will be effective immediately upon publication in the Federal Register.[8] The Appropriations Act

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[4] *See Amendment of the Commission's Rules with Regard to the Establishment and Regulation of New Digital Audio Radio Services*, GEN Docket No. 90-357, *Report and Order*, 10 FCC Rcd 2310 (1995). The broadcasting-satellite service is a radiocommunication service in which signals transmitted or retransmitted by space stations are intended for direct reception by the general public. *Id.* at page RR1-7.

[5] *See* note 1, *supra.*

[6] *See* Omnibus Consolidated Appropriations Act, 1997, P.L. 104-208, 110 Stat. 3009 (1996).

[7] *See* 47 U.S.C. 309(j).

[8] The Appropriations Act makes inapplicable to this rule making proceeding the contrary requirements of 5 U.S.C. § 553(d) (Administrative Procedure Act provision that a substantive rule must generally be published in the Federal Register at least 30 days before its effective date) and 5 U.S.C. §§ 801(a)(3) and 806(a) (Contract With America Advancement Act provisions).

further provides that 5 U.S.C. Chapter 6 (regulatory flexibility analysis requirements) and 44 U.S.C. §§ 3507 and 3512 (information collection requirements) will not apply to the rules and competitive bidding procedures governing the frequencies at issue here. Further, the statute provides that the Commission may grant a license application for these frequencies no earlier than seven days following issuance of a public notice of the acceptance for filing of the application or major amendment thereto, notwithstanding the 30-day public notice provisions of 47 U.S.C. § 309(b). Finally, the statute provides that the Commission may specify a period that is not less than five days following issuance of such public notice for the filing of petitions to deny a license application for these frequencies, notwithstanding the 30-day public notice provisions of 47 U.S.C. § 309(d)(1).

B. Existing Spectrum Allocations and Use

1. International

4. With regard to the frequencies under consideration in this proceeding, the member nations of the International Telecommunication Union ("ITU") have adopted the following radio service allocations that apply to use of this spectrum in the United States.[9] The 2300-2450 MHz band is allocated to the fixed, mobile, and radiolocation services on a primary basis.[10] In addition, the 2310-2360 MHz band is allocated to the broadcasting-satellite service (sound) and complementary terrestrial sound broadcasting service on a primary basis in the United States, and

[9] *See* ITU *Final Acts of the World Radiocommunication Conference (WRC-95), Geneva, 1995.*

[10] The aeronautical mobile service for telemetry, however, has priority over other uses by the mobile service in the 2300-2390 MHz band in the United States and the 2300-2483.5 MHz band in Canada. *See* international footnote S5.394. We also note that the ITU is transitioning to new Simplified Radio Regulations, which use the "S" numbering scheme for international footnotes. In anticipation of the ITU's ultimate conversion to the Simplified Radio Regulations, we are employing the new "S" numbering scheme for international footnotes adopted in this proceeding. The Commission lists the international footnotes immediately following the Table of Frequency Allocations in Section 2.106 of the Rules. *See* 47 C.F.R. § 2.106. Until such time as this list is revised in its entirety to comport with the new "S" numbering scheme, those international footnotes that are amended to the new scheme in individual proceedings will be listed in Section 2.106 immediately prior to the list of unamended footnotes employing the old numbering scheme.

this use is limited to digital audio broadcasting.[11] Finally, the 2300-2450 MHz band is allocated to the amateur radio service on a secondary basis.[12]

2. Domestic

5. In the United States, the 2300-2310 MHz band was made available for exclusive non-Government use as of August 10, 1995.[13] Currently, the only non-Government use of this band is by the amateur radio service, which operates in this spectrum on a secondary basis.[14] The 2310-2360 MHz band was recently re-allocated to the non-Government broadcasting-satellite service on primary basis.[15] This allocation is limited to digital audio broadcasting, commonly known as satellite DARS, in the United States.[16] In the action allocating this spectrum to satellite DARS, we stated that it would be necessary to accommodate the aeronautical telemetry services now operating in the 2310-2360 MHz band in the 2360-2390 MHz band.[17] The aeronautical telemetry community supported this re-accommodation. Continued use of the 2310-

[11] *See* 47 C.F.R. § 2.106, international footnote S5.393 (formerly 750B) and 47 C.F.R. § 2.106, United States footnote US327. This broadcasting-satellite allocation is also subject to the provisions of ITU Resolution 528. In addition, space stations of the broadcasting-satellite service in the 2310-2360 MHz band operating in accordance with No. S5.393 that may affect the services to which this band is allocated in other countries must be coordinated and notified in accordance with Resolution 33. Complementary terrestrial broadcasting stations are subject to bilateral coordination with neighboring countries prior to commencing their operations. *See* 47 C.F.R. § 2.106, international footnote S5.396 (formerly 751B).

[12] The amateur service is a radiocommunication service for the purpose of self-training, intercommunication and technical investigations carried out by amateurs, that is, by duly authorized persons interested in radio technique solely with a personal aim and without pecuniary interest. *See* note 1, *supra*, at page RR1-10.

[13] During the reallocation process, the National Telecommunications and Information Administration ("NTIA") recommended the following constraints: (1) the 2300-2310 MHz band must not be used for airborne or space-to-Earth links; (2) commercial operations at 2300-2310 MHz must be limited to less than one watt of power; (3) unwanted emission levels of commercial applications on any frequency below 2300 MHz must be attenuated below the mean power of the unmodulated carrier by 70 dB; (4) and operation of commercial devices in the 2300-2310 MHz band must not be permitted on Ft. Irwin, California. *See Spectrum Reallocation Final Report*, U.S. Department of Commerce, February 1995, at pages 4-15 and 4-16.

[14] *See* 47 C.F.R. § 97.301. The 2300-2310 MHz band is available for use by amateur stations having a control operator who has been granted any class of amateur operator license, except Novice.

[15] *See* note 4, *supra.*

[16] We are considering service, licensing and technical rules for satellite DARS in IB Docket No. 95-91. *See Establishment of Rules and Policies for the Digital Audio Radio Satellite Service in the 2310-2360 MHz Frequency Band*, IB Docket No. 95-91, *Notice of Proposed Rule Making*, 11 FCC Rcd 1 (1996) ("*Satellite DARS NPRM*").

[17] *See* note 4, *supra.*

2360 MHz band by aeronautical telemetry and radiolocation users will be on a secondary basis.[18]

III. DISCUSSION

A. Reallocation of Spectrum for WCS

6. The Appropriations Act directs the Commission to reallocate the 2305-2320 and 2345-2360 MHz bands to wireless services that are consistent with international agreements concerning spectrum allocations.[19] We interpret this provision to mean that the Commission may allocate this spectrum to any or all radio services also contained in the International Table of Frequency Allocations applicable to the United States. We believe that the allocation for WCS should provide for the broadest range of services permitted under international agreements. Accordingly, we propose to allocate the 2305-2320 and 2345-2360 MHz bands to the fixed, mobile, and radiolocation services on a primary basis. We also propose to retain the current primary broadcasting-satellite allocation in the 2310-2320 and 2345-2360 MHz bands. We request comment on these proposals.

7. We note, however, that the large number of Canadian fixed service facilities in the 2310-2320 MHz band has previously caused us to request comment on licensing satellite DARS in the 2320-2360 MHz band first.[20] Accordingly, we request comment on the feasibility of satellite DARS in the 2310-2320 MHz band and on whether we should limit satellite DARS to the 2345-2360 MHz portion of the WCS spectrum. Alternatively, we could limit operations at 2310-2320 MHz to complementary terrestrial DARS operations subject to coordination with Canada. We request comment on these options.

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[18] The 2320-2345 MHz band will continue to be available for the Government and non-Government mobile service and Government radiolocation service on a primary basis, until January 1, 1997, or until such time as a broadcasting-satellite (sound) service has been brought into use in such a manner as to affect or be affected by the mobile and radiolocation services, whichever is the later date. *See* Appendix for proposed revision of footnote US328.

[19] *See* Appropriations Act, Section 3001(a)(1).

[20] *See* 11 FCC Rcd at 21. Satellite CD Radio, Inc., an applicant for a satellite DARS license, conducted an independent study which analyzed the coordination of U.S. satellite DARS systems with Canadian terrestrial systems and submitted it to the Commission. *See* Letter to Chief, Satellite Radio Branch regarding the Coordination of 2310-2360 MHz with Canada ("Coordination Study"), dated February 14, 1994, IB Docket No. 95-91. According to the Coordination Study, in 1994, 186 of 213 Canadian terrestrial stations operated between 2310-2320 MHz. See Coordination Study at 14. *See also* letter from Satellite Engineering Branch dated February 16, 1996 to representatives of Satellite CD Radio and other DARS applicants. Recent discussions between our staff and Industry Canada indicate that there are now approximately 230 Canadian terrestrial stations operating in the 2310-2360 MHz band. In addition, Canada has mobile aeronautical telemetry ("MAT") operations in the 2329.25-2390 MHz band.

8. As mentioned above, the 2300-2310 MHz band is currently allocated to the amateur radio service on a secondary basis. In addition, the 2310-2360 MHz band is permitted to be used by aeronautical telemetry operations on a secondary basis. We do not propose any changes to these allocations at this time. We reiterate, however, that these operations would be secondary to any WCS use of the 2305-2320 and 2345-2360 MHz bands. We seek comment on this approach.

B. Licensing Plan for WCS

1. Permitted Services

9. As indicated above, our spectrum allocation proposals for the 2305-2320 and 2345-2360 MHz bands would permit the provision of a broad range of fixed, mobile, radiolocation and broadcasting-satellite services. In keeping with this broad allocation, we propose to permit a WCS licensee to use this spectrum for any use permitted within any of the allocation categories of fixed, mobile, radiolocation, and broadcasting-satellite services, subject to international requirements and coordination. In establishing the General Wireless Communications Service ("GWCS") in August, 1995, we concluded that authorizing a wide variety of services bounded only by international allocations comported with our statutory authority and served the public interest by fostering the provision and mix of services most desired by the public.[21] Similarly, we believe that permitting this flexibility in service offerings for WCS will foster the provision and mix of WCS services most desired by the public. We request comment on this approach. In particular, we request comment on industry experience and plans with regard to the GWCS, including how our rules permitting any and all allocable services in that band have served or are expected to serve the public interest in rapidly making available to the public those services most desired.

2. Licensed Service Areas

10. We also generally believe that licensing the WCS spectrum on the basis of large geographic service areas would facilitate operation of the broadest possible range of new communications services in the WCS spectrum and would promote their introduction in the most rapid and efficient manner. We request comment on the appropriate size for WCS licenses. Specifically, we request comment on whether WCS should be licensed on the basis of the 51 Major Trading Areas ("MTAs") defined for the narrowband and broadband Personal Communications Service ("PCS"),[22] regional service areas similar to the 5 regions adopted for

[21] *See Allocation of Spectrum Below 5 GHz Transferred from Federal Government Use, Second Report and Order*, 11 FCC Rcd 624 (1995). *See also* Becht, "The General Wireless Communications Service: FCC Spectrum Traffic Cop or Broker?," 4 Commlaw Conspectus 95 (1996).

[22] Rand McNally & Company ("Rand McNally") has divided the 50 States and the District of Columbia into 47 MTAs. *See* Rand McNally 1992 Commercial Atlas & Marketing Guide at pages 38-39 (123rd edition). Following the approach we have taken with regard to other services in which we have used MTA license areas, we

narrowband PCS,[23] or on a nationwide basis. For example, in the case of broadband PCS, we noted that the 51 MTA service areas, would provide certain economies of scale and scope needed for the development of low cost equipment, would promote the development roaming within large geographic areas and would facilitate interoperability.[24] In the case of narrowband PCS, we found it desirable to provide a service category that is smaller than nationwide but larger than the 51 Major Trading Areas on which many of the narrowband PCS licenses are based.[25] We observed that regional licenses would better reflect the technologies and business plans of parties intending to implement narrowband PCS systems serving wide areas that cover multiple cities.

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would separate Alaska from the Seattle MTA so that Alaska would be licensed as a separate MTA-like area. We also would license separately the following insular areas as MTA-like areas: (1) Puerto Rico and the United States Virgin Islands; (2) Guam and the Northern Mariana Islands; and (3) American Samoa. Thus, if this alternative is adopted, we would license 51 MTAs and MTA-like areas, which is the approach we adopted in PCS. *See* 47 C.F.R. §§ 24.102(c) and 24.202(a). We note that Rand McNally owns the copyright to MTA Listings. The Personal Communications Industry Association and Rand McNally entered into an agreement regarding the use of Rand McNally's market area designations (*e.g.*, MTAs) for licensing of various mobile radio services. WCS services in the 2305-2320 and 2345-2360 MHz bands are not covered by this agreement. Accordingly, a license agreement with Rand McNally would be necessary. The listings of the MTAs, including the counties, parishes, and census divisions that comprise each MTA, are available for public inspection in the Office of Engineering and Technology's Technical Information Center, 2nd Floor, 2000 M Street, N.W., Washington, D.C.

[23] The five regional narrowband PCS services areas were developed by aggregating MTAs into five geographic areas, each with approximately twenty percent of the nation's population. The five regions defined for narrowband PCS licenses are set forth in 47 C.F.R. §§ 24.102(b). *See Memorandum Opinion and Order* in GEN Docket No. 90-314 and ET Docket No. 92-100, 9 FCC Rcd 6 (1994), at ¶¶ 7-16. Thus, if we were to use the narrowband PCS regional service areas, as indicated above for MTAs, a license agreement with Rand McNally would be necessary. Alternatively, if a regional service area approach is deemed appropriate, we could also, for example, aggregate the 172 Economic Areas developed by the Department of Commerce into five geographic areas, each with approximately twenty percent of the nation's population. For example, such an approach was proposed for 220 MHz services in PR Docket No. 89-552. *See Amendment of Part 90 - Use of 220-222 MHz Band, Third Notice of Proposed Rulemaking,* 11 FCC Rcd 188, 219 & 296 App. D (1995). The Bureau of Economic Analysis within the Department of Commerce has divided the 50 States and the District of Columbia into 172 Economic Areas ("EAs"). Each EA consists of one or more economic nodes -- metropolitan areas or similar areas that serve as centers of economic activity -- and the surrounding counties that are economically related to the nodes. (Metropolitan areas include metropolitan statistical areas, primary metropolitan statistical areas, and New England county metropolitan areas.) Commuting patterns are the main factor used in determining the economic relationship among counties. The EA definition procedure requires that, as far as possible, each area include both the place of work and the place of residence of its labor force. *See Final Redefinition of the BEA Economic Areas*, 60 Fed. Reg. 13114 (March 10, 1995) (reducing number of EAs from 183 to 172). We adopted these 172 EAs as GWCS service areas and have listed them in 47 C.F.R. § 26.102(a). In addition, we defined three additional, EA-like, GWCS service areas: (1) Puerto Rico and the United States Virgin Islands; (2) Guam and the Northern Mariana Islands; and (3) American Samoa. 47 C.F.R. § 26.102(b).

[24] *See Amendment of the Commission's Rules to Establish New Personal Communications Services*, GEN Docket No. 90-314, *Second Report and Order*, 8 FCC Rcd 7700 at ¶ 75 (1993).

[25] *See Memorandum Opinion and Order*, GEN Docket No. 90-314 and ET Docket No. 92-100, at ¶¶ 8 and 14.

On the other hand, a nationwide service area would facilitate nationwide roaming and interoperability of services, and avoid the need for negotiation of roaming agreements among multiple carriers. A nationwide approach would also allow for maximum economies of scale, thus minimizing both the cost of providing service and the cost of equipment.

3. Spectrum for Each License

11. We also request comment on the appropriate amount of spectrum to be provided for each WCS license. We specifically request comment on a range of spectrum options for WCS, that is whether 5, 10, 15 or 30 MHz is the most suitable amount. We are particularly interested in commenters' views regarding the minimum bandwidth needed to permit WCS operators to compete effectively. For example, 5 MHz bandwidths would allow for paging, radiolocation, dispatch, or point-to-point backbone operations. Larger bandwidths, such as 10 to 15 MHz, would allow more direct competition with existing fixed and mobile service providers. Such an amount may also better support some multi-channel satellite DARS. Alternatively, a single 30 MHz license may offer the most effective approach for providing new two-way fixed or point-to-multipoint uses such as interconnection with the Internet and other digital network services. Finally, we request comment on what size spectrum block could best support, in part or fully, the provision of fixed local loop services.[26]

12. We also seek comment on plans for licensing the WCS consistent with whatever minimum bandwidth should be adopted. We specifically request comment, for example, on whether the WCS spectrum should be assigned on a paired or unpaired basis. Alternatively, we request comment on an approach where spectrum bandwidths or pairing of the spectrum are determined through the competitive bidding process. For example, the 30 MHz of spectrum could be divided into 5 MHz "channels" and the amount of spectrum and the location of the spectrum (*i.e.*, contiguous or paired) for each WCS licensee would be determined through the auction process. We seek comment on all of these alternatives and we further invite commenting parties to suggest additional alternatives for both the amount of spectrum and the size of service areas for WCS licensees.

13. Finally, we note that the Appropriations Act requires that the Commission conclude initial licensing of this spectrum and the collection of all bidding proceeds on an expedited basis. We believe that licensing the WCS spectrum for service to large areas, with relatively few licenses to be awarded, would speed the WCS licensing process and the collection of bidding proceeds, consistent with the requirements of the Appropriations Act. In addressing the relative merits of licensing the WCS spectrum on the basis of each of the spectrum and service area possibilities discussed above, we ask interested parties to keep in mind the total number of licenses to be auctioned and to comment on whether that number of licenses can reasonably be

[26] *See,* for example, Petition for Rule Making filed by DSC Communications Corporation, dated June 4, 1996, RM-8837.

auctioned within the time periods established by the Appropriations Act.[27] Whatever initial licensing approach is chosen for WCS, we propose to permit spectrum and service area aggregation through the auction process, *e.g.*, we would permit parties to bid for more than one license. In addition, as discussed below, we propose to allow post-auction partitioning and disaggregation. We request comment on how the choice of the number of licensees and amount of spectrum provided could affect competition. Commenting parties should also address the extent to which the new communications services offered by WCS would compete with other new and existing communications services.

C. Use of Competitive Bidding

14. The Appropriations Act directs the Commission to assign licenses to use the 2305-2320 and 2345-2360 MHz bands by competitive bidding pursuant to Section 309(j) of the Communications Act.[28] Section 309(j) generally provides that auctions may be used to award licenses among mutually exclusive applicants where the principal use of such spectrum will involve, or is reasonably likely to involve, a subscription-based service. We believe that it is reasonable to conclude that, given the broad service allocations we are proposing and the manner in which we are proposing to license this spectrum, the principal use of the WCS will involve, or is reasonably likely to involve, the transmission or reception of communications signals to subscribers for compensation. We anticipate that the most likely uses of WCS will be to provide a mix of fixed and mobile services similar to other services currently operating on a subscription basis. Fixed (and radiolocation) services are expected to include services that are generally similar to the Multichannel Multipoint Distribution Service ("MMDS"), the Location and Monitoring Service ("LMS"), Digital Termination Systems ("DTS"), Digital Electronic Messaging Service ("DEMS") and certain of the services provided by Local Multipoint Distribution Service ("LMDS"). Mobile services are expected to include services generally similar to PCS, cellular, Specialized Mobile Radio ("SMR") and paging. All of these services are currently provided to subscribers for compensation and we expect that the new WCS offerings would be provided on a similar basis. In this regard, even if a WCS licensee chooses to offer a satellite DARS service on that portion of the spectrum available for such use, we believe it likely that this service would also be offered on a subscription basis.[29] We request comment on this assessment.

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[27] We note, however, that a licensing plan of six 5 MHz licenses for each of the 51 MTA-like service areas would require the auctioning of 306 licenses. Given our previous auction experience, such an auction may be difficult to complete within the timeframe required under the Appropriations Act and may require different auction methodology, such as oral outcry, to complete on a timely basis. We therefore generally will not entertain proposals that would require the auctioning of more than 306 WCS licenses.

[28] *See* 47 U.S.C. § 309.

[29] We note that, during the Commission's ongoing proceeding to establish service rules for satellite DARS, three of the four applicants on file propose services offered pursuant to private contractual relationship with the subscribing audience using a scrambled signal. *See* note 16, *supra*, at ¶¶ 22-26. In contrast, a broadcasting service involves the transmission of programming intended for direct reception by the general public. *See* 47 C.F.R. § 2.1. Thus, we stated that, since three applicants have proposed to provide non-broadcast service within the meaning of

15. As required by the Appropriations Act, we are proposing to assign licenses to use the WCS frequencies by competitive bidding in accordance with the principles set forth in Section 309(j) of the Communications Act. Section 309(j)(3)(A) states that the Commission shall seek to promote the development and rapid deployment of new technologies, products, and services for the benefit of the public, including those residing in rural areas, without administrative or judicial delays. In this regard, we believe that providing for large service areas, in conjunction with our broad, flexible allocation approach described above, will foster the development of the greatest range of new services and technologies. This approach will also permit these services and technologies to be deployed in a rapid and efficient manner to all areas of the nation, including rural areas.

16. Section 309(j)(3)(B) states that the Commission shall seek to promote economic opportunity and competition and ensure that new and innovative technologies are readily accessible to the American people by avoiding excessive concentration of licenses and by disseminating licenses among a wide variety of applicants, including small businesses, rural telephone companies, and businesses owned by members of minority groups and women. Consistent with this objective, we are proposing to allow WCS licensees to disaggregate portions of their assigned spectrum and partition geographic service areas through a transfer of FCC license authority. In addition, licensees would be permitted to "franchise" portions of their spectrum and geographic service areas on a leased basis, where the WCS licensee would retain ultimate responsibility for meeting interference and other licensing requirements. We recently addressed the issues of geographic partitioning and spectrum disaggregation by Commercial Mobile Radio Service ("CMRS") licensees, and noted that providing licensees with the flexibility to partition their geographic service areas will create smaller areas that can be licensed to small businesses, including those entities which may not have the resources to participate successfully in spectrum auctions.[30] In addition, partitioning may provide a funding source that will enable licensees to construct their systems and provide the latest in technological enhancements to the public. We believe that this ability to disaggregate and franchise the use of this spectrum may also help to promote the prompt introduction of new services to rural areas and facilitate participation in these services by a wide variety of parties including small businesses, rural telephone companies, and businesses owned by members of minority groups and women.

Section 2.1 of the Commission's Rules and *Subscription Video*, a requirement that all DARS licensees operate as broadcasters appears to be unwarranted and inappropriate. *See Subscription Video*, 2 FCC Rcd 1001, 1006 (1987) (licensees that limit receipt of program services to paying subscribers are providing non-broadcast services), *aff'd sub nom. National Association for Better Broadcasting v FCC*, 849 F. 2d 665 (D.C. Cir. 1988).

[30] *See Geographic Partitioning and Spectrum Disaggregation by Commercial Mobile Radio Services Licensees; Implementation of Section 257 of the Communications Act -- Elimination of Market Entry Barriers (Elimination of Market Barriers)*, WT Docket No. 96-148, *Notice of Proposed Rule Making*, 11 FCC Rcd 10187 (1996).

17. Finally, we note that Section 309(j)(6)(F) of the Communications Act specifically states that the use of competitive bidding shall not be construed to prohibit the Commission from issuing nationwide, regional, or local licenses.[31] We also note that using large geographic service areas would simplify the licensing process, and help to ensure that the auction is completed in a timely manner, as required by the Appropriations Act. Accordingly, we believe that the WCS competitive bidding options described above fully comport with the requirements and intent of Section 3001 of the Appropriations Act and Section 309(j) of the Communications Act. We seek comment on this assessment.

D. Promote Efficient Spectrum Use

18. The Appropriations Act states that in making these frequencies available for competitive bidding, the Commission shall seek to promote the most efficient use of the spectrum.[32] In general, we believe that assigning frequencies through competitive bidding ensures that spectrum is made available to those who value it most highly and therefore are most likely to put it to its most economically efficient use. In addition, as indicated above, we are proposing that the WCS spectrum may be used to provide any type of fixed, mobile, radiolocation or satellite DARS services. We believe there are significant competitive alternatives for each of these types of services that will ensure that WCS licensees have incentives to operate in an efficient and effective manner. We therefore believe that there will be sufficient market incentives to promote the most efficient use of the 2305-2320 and 2345-2360 MHz bands, as required by the Appropriations Act.

E. Public Safety Needs

19. The Appropriations Act instructs the Commission to take into account the needs of public safety radio services in making the WCS spectrum available through competitive bidding. In addition, a letter from the Chairman and Ranking Member of the House Committee on Commerce reiterates Congressional intent that we consider the needs of public safety in auctioning this spectrum. In particular, this letter suggests that the Commission, consistent with its obligation to promote the public interest, "pay particular attention to how the needs of public safety as well as commercial applicants may best be met in determining how to design this auction." As Congress directed, we will consider the needs of public safety radio services in this proceeding by seeking comment on a broad array of options. We note that the Appropriations Act marks the first time that Congress has specifically directed the Commission to consider the needs of public safety radio services in connection with licensing a particular spectrum band. We invite interested parties, including public safety entities, to comment on how we could best effectuate the Congressional intent with regard to public safety needs related to this spectrum.

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[31] *See* 47 U.S.C. § 309(j)(6)(F).

[32] *See* Appropriations Act, Section 3001(b)(1). As indicated above, promoting efficient spectrum use is also an objective of Section 309(j) of the Communications Act.

20. The Public Safety Wireless Advisory Committee recently issued a report ("*PSWAC Final Report*") that analyzes the current and future communications resource and underlying spectrum needs of entities whose primary mission is public safety. The *PSWAC Final Report* makes several recommendations for satisfying the immediate and future needs of the public safety community through the year 2010 including (1) the provision of additional spectrum, (2) improved interoperability, (3) more flexible licensing policies, (4) increased sharing of spectral and other resources, (5) greater use of commercial services and (6) alternative methods for funding public safety communications. In fulfilling Congress's mandate to take into account the needs of public safety in auctioning this spectrum, we seek comment on which of these objectives can best be achieved through an auction of this spectrum. We ask commenters to make specific recommendations regarding how we can design auction and licensing rules that will benefit the public safety community consistent with the recommendations contained in the *PSWAC Final Report.*

21. One of the needs identified by public safety is additional spectrum. We note that the *PSWAC Final Report* did not recommend this band for public safety use, but we also recognize that Congress had not directed the Commission to reallocate and auction this spectrum when the *PSWAC Final Report* was submitted. We therefore seek comment on whether we should consider an allocation of some portion of this spectrum to meet the needs of public safety providers. In light of the specific language of this statute, we seek comment on we whether we have statutory authority to make such an allocation. Alternatively, should the Commission assign this spectrum with a public interest obligation to contribute towards the other needs identified by the public safety community? We seek comment on whether the Commission would have the authority to adopt such an approach.

22. In addition, it may be that in the WCS spectrum some of the communications needs of public safety entities could be met by commercial systems serving the general public and possibly with some customized features for the exclusive use of public safety users. Public safety organizations may find it desirable to subscribe to a service offered by the commercial provider or lease capacity or spectrum from a commercial provider. We note that a key recommendation of the *PSWAC Final Report* suggested that "a range of non-mission critical communications can be satisfied by commercial systems" and concluded that:

> Commercial wireless systems, such as cellular, Personal Communications Services (PCS), mobile satellite, paging, data, and network applications, are evolving rapidly and may offer tangible and reasonable alternatives to the demand for additional spectrum to meet present and future Public Safety requirements.

We seek comment on whether and how commercial services operating in this spectrum could address some of the communications needs of the public safety community. Specifically, what types of commercial services in this band would public safety entities find useful? Should the Commission take steps to encourage the use of the spectrum for such services? If so, what steps should it take? For example, should public safety needs be considered in determining the geographic scope and size of WCS licenses? If so, what size spectrum blocks or particular

geographic license areas would be most conducive to the types of services the public safety community would find useful? Should the Commission offer bidding credits to commercial providers who propose to provide these types of services?

F. Service and Technical Rules

1. Eligibility

23. We propose that there be no restrictions on eligibility for a WCS license, other than those foreign ownership restrictions set forth in Sections 310(a), 310(b)(1) and 310(b)(2) of the Communications Act.[33] We believe that opening the WCS market to a wide range of applicants will permit and encourage entrepreneurial efforts to develop new technologies and services, while helping to ensure the highest and best use of this spectrum. We also believe that, given the relatively large amount of spectrum that is available to provide services similar to those that could be operated on the WCS spectrum, opening up eligibility to all applicants, in this instance, will not lead to concerns about excessive concentration of market power.[34] On the other hand, disallowing existing licensees or other entities from competing for a WCS license could deny the public the benefits of economies of scope and scale from the use of this spectrum.

2. CMRS Spectrum Cap

24. The CMRS spectrum cap[35] was adopted in 1994 to "discourage anti-competitive behavior while at the same time maintaining incentives for innovation and efficiency."[36] We were concerned that "excessive aggregation [of spectrum] by any one of several CMRS licensees could reduce competition by precluding entry by other service providers and might thus confer excessive market power on incumbents."[37] The spectrum cap is intended to promote a vigorous

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[33] *See* 47 U.S.C. § 310.

[34] In this regard, we also see no reason to preclude the pending satellite DARS applicants from participating in the competitive bidding process for the 2310-2320 and 2345-2360 MHz bands.

[35] The spectrum cap currently provides that "[n]o licensee in the broadband PCS, cellular, or SMR services (including all parties under common control) regulated as CMRS shall have an attributable interest in a total of more than 45 megahertz of licensed broadband PCS, cellular and SMR spectrum regulated as CMRS with significant overlap in any geographic area." *See* 47 C.F.R. §20.6(a); *see also Amendment of Parts 20 and 24 of the Commission's Rules -- Broadband PCS Competitive Bidding and the Commercial Mobile Radio Service Spectrum Cap*, WT Docket No. 96-59, *Report and Order*, 11 FCC Rcd 7824, ¶¶ 94-107 (1996) (maintaining the 45 megahertz CMRS spectrum cap and eliminating the 35 megahertz cellular/PCS spectrum cap and the 40 megahertz PCS spectrum cap).

[36] Implementation of Sections 3(n) and 332 of the Communications Act, *Third Report and Order*, GN Docket 93-252, 9 FCC Rcd 7988, 8105 (1994) ("*CMRS Third Report and Order*").

[37] *Id.* at 8101.

competitive market for the provision of commercial mobile radio services, and to ensure that each mobile service provider (*i.e.*, cellular, PCS or SMR licensee) has the opportunity to obtain sufficient spectrum to compete effectively and that no single provider is able to preclude the provision of service by effective competitors or significantly reduce the number of competitors by aggregating spectrum.[38]

25. We seek comment on whether WCS spectrum used to provide CMRS should count against the 45 megahertz spectrum cap that applies to certain CMRS licensees. We note that applying the spectrum cap could well exclude firms with the most experience and innovative technologies from participating in the auction and having the opportunity to use this spectrum to serve the public. On the other hand, if a CMRS provider with the maximum amount of spectrum permitted under our current CMRS spectrum cap were to acquire WCS spectrum, that provider possibly could gain a dominant position in the CMRS marketplace. We are interested in commenters' views on whether the WCS spectrum is likely to be used to provide CMRS services, and, if so, whether the current CMRS market is sufficiently competitive that the considerations that gave rise to adoption of the CMRS spectrum cap are not applicable to the WCS spectrum. Commenters should also address the potential costs of applying the cap to the WCS spectrum in terms of lost economies of scale and scope that might exist if CMRS licensees were allowed to acquire this spectrum.

26. To the extent that commenters believe that the WCS spectrum will be used for CMRS services, we also seek comment on any alternative mechanisms that would be appropriate to protect against the concentration of control of licenses for CMRS spectrum, in order to ensure vigorous competition in wireless services and to implement the Communications Act.

3. Disaggregation and Partitioning

27. As indicated above, we propose to permit the WCS licensee or licensees to partition their service areas and to disaggregate their spectrum. We believe that such an approach would serve to promote the efficient use of the spectrum. It would also provide a means to overcome entry barriers through the creation of smaller licenses that require less capital, thereby facilitating greater participation by smaller entities such as small businesses, rural telephone companies and businesses owned by minorities and women.[39]

28. We therefore propose to permit WCS licensees to partition their service areas into smaller geographic service areas. We also propose to permit WCS licensees to disaggregate their spectrum into smaller blocks. Thus, a WCS licensee would be allowed to transfer the license for all or a portion of its spectrum in a given geographic area to another party. For the purposes of partitioning and disaggregation, we also propose to require that WCS systems be designed to not

[38] *See CMRS Third Report and Order* at ¶¶ 258-260.

[39] *See Elimination of Market Barriers*, at ¶¶ 11-15.

exceed a signal level of 47 dBuV/m at the licensee's service area boundary, unless the affected adjacent service area licensees have agreed to a different signal level. We request comment on what limits, if any, should be placed on a WCS licensee's ability to partition its service area and disaggregate its spectrum.

29. We note that in WT Docket No. 96-148, we recently proposed to permit both geographic partitioning and spectrum disaggregation by CMRS licensees.[40] In the case of broadband PCS service, we proposed to permit geographic partitioning along county lines and spectrum disaggregation to a minimum of one megahertz. In making this proposal, we tentatively concluded that requiring partitioning of licenses along county lines and spectrum disaggregation of not less than one megahertz would reduce the administrative burden on the Commission and minimize interference concerns among licensees. We also indicated that once an initial license is assigned, we believe that licensees should ordinarily be free to disaggregate their spectrum and to partition their service areas in order to operate within the parameters that they determine to be efficient. We request comment on whether such an approach should apply to the WCS spectrum. We also request comment on whether, if we were to establish initial nationwide WCS service areas, geographic partitioning should be limited to larger areas such as the 51 MTA service areas. Such an approach might facilitate the relicensing of such areas if the licensee were, for example, to go out of business. This approach may also reduce the administrative burden on the Commission or for international coordination of WCS operations. As indicated above, we are also proposing to allow WCS licensees to franchise portions of their spectrum and geographic service areas on a leased basis. In such cases, we see no need to limit such operations to any minimum amount of spectrum or any particular geographic area since the WCS licensee would retain ultimate control and responsibility for all operations and there is no additional administrative burden on the Commission. We request comment on these proposals.

4. License Term

30. The Communications Act allows the Commission to establish a license term of up to 10 years, except for broadcasting stations, which may have a license term of up to 8 years.[41] Previously, the Commission established a 10 year license term for CMRS, but has used a 5 year license term for private services. For services in the 2305-2320 and 2345-2360 MHz bands, we propose to establish a license term of 10 years, with a renewal expectancy similar to that of PCS and cellular telephone licensees. We believe that this relatively long license term, combined with a high renewal expectancy, should help provide a stable regulatory environment that will be attractive to investors and, thereby, encourage development of this new frequency band. With respect to the renewal of a WCS license, we propose to consider the amount and type of service being provided by the licensee in connection with its license renewal application. In this

[40] *See Geographic Partitioning and Spectrum Disaggregation by Commercial Mobile Radio Service Licensees*, WT Docket No. 96-148, *Notice of Proposed Rule Making*, FCC 96-287 (released July 15, 1996).

[41] *See* 47 U.S.C. § 307. Previously, television and radio broadcasting stations were permitted to have a license term of up to 5 and 7 years, respectively.

connection, we propose to require WCS licensees to submit a showing five years from license grant and ten years from license grant demonstrating the construction of facilities and the level of service being provided.

31. In the event that a WCS license is partitioned or disaggregated, we propose that any partitionee/disaggregatee be authorized to hold its license for the remainder of the partitioner's/disaggregator's original ten-year license term. We tentatively conclude that this approach is appropriate because a licensee, through partitioning, should not be able to confer greater rights than it was awarded under the terms of its license grant. Moreover, we tentatively conclude that this approach would be the simplest to administer. We also observe that this approach is similar to the partitioning provisions we recently adopted for the Multipoint Distribution Service[42] and proposed in the *Broadband NPRM*.[43] We solicit comment on this tentative conclusion.

5. Regulatory Status

32. The Communications Act applies differing requirements based on the type of service and the regulatory status of licensees, *e.g.*, whether the service is common carrier or private. A WCS operator would be allowed to provide a variety or combination of fixed, mobile, satellite DARS, and radiolocation services. Therefore, we propose to rely on the applicant to identify the type of WCS service or services it will provide, with sufficient detail to enable the Commission to determine the applicant's regulatory status. This approach should allow us to carry out our responsibilities while imposing the least regulatory burden on the licensee. To clarify and simplify the initial regulatory status, we will presume that a WCS licensee is providing a CMRS service, which we believe will be a likely use of this spectrum, as discussed above. We delegate to the Wireless Telecommunications Bureau authority to develop forms appropriate to collect this data, and to monitor changes in licensee status. Moreover, we propose that the broadcasting-satellite service allocation be governed by the satellite DARS regulations currently under development in IB Docket No. 95-91. We request comment on these proposals.

6. Out-of-Band Emission Limits

33. Since WCS will operate in the 2305-2320 and 2345-2360 MHz bands, we need to consider interference protection to the following adjacent operations: 1) satellite DARS at 2320-

[42] *See Amendment of Parts of Parts 21 and 74 of the Commission's Rules With Regard to Filing Procedures in the Multipoint Distribution Service and in the Instructional Television Fixed Service*, MM Docket No. 94-131, *Report and Order*, 10 FCC Rcd 9589, 9614 (1995).

[43] *See Broadband NPRM* at 15-16.

2345 MHz, 2) Government Deep Space Network receivers at 2290-2300 MHz,[44] and 3) Government and commercial telemetry above 2360 MHz.

34. In order to provide protection to these adjacent operations, we propose that all emissions outside of the WCS bands of operation be attenuated below the maximum spectral power density (p) within the band of operation, as follows:

1) *For fixed operations, including radiolocation*: By a factor not less than 43 + 10 log (p) dB on all frequencies between 2300 and 2305 MHz and above 2360 MHz; and not less than 70 + 10 log (p) dB on all frequencies below 2300 MHz and between 2320-2345 MHz band.

2) *For mobile operations, including radiolocation*: By a factor not less than 43 + 10 log (p) dB on all frequencies between 2300 and 2305 MHz, between 2320 and 2345 MHz, and above 2360 MHz; and not less than 70 + 10 log (p) dB on all frequencies below 2300 MHz.

3) *For WCS satellite DARS operations*: The limits set forth in Section 25.202(f) of the Commission's rules apply.[45]

For fixed and mobile operations, including radiolocation, the above requirements are based on peak measurements using a resolution bandwidth of a least 1 MHz. In addition, to further protect operations in adjacent bands, we propose to require that the frequency stability of transmission within the 2305-2320 and 2345-2360 MHz bands be sufficient to ensure that the fundamental emissions remain within the authorized frequency bands. We request comment on these proposed out-of-band emissions limits.

35. Finally, in order to protect Government Deep Space Network receivers at 2290-2300 MHz, we propose to prohibit use of the 2305-2310 MHz band for airborne or space-to-Earth links. Further, we propose that WCS operations within 50 kilometers (31 miles) of 35° 20' North Latitude and 116° 53' West Longitude (coordinates of the Deep Space Network receive site) be subject to coordination. Alternatively, we request comment on whether it would be more appropriate to require less out-of-band attenuation in the case of mobile transmitters, (*i.e.*, such transmitters would be subject to only the 43 + 10 log (p) dB requirement) but require that the coordination zone be extended to 120 kilometers (75 miles). Parties should address the trade-offs with regard to lower mobile equipment costs and the additional coordination constraints imposed by this alternative.

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[44] The National Aeronautics and Space Administration ("NASA") operates a complex on the Ft. Irwin Military Reservation for its Deep Space Network in order to provide continuous communications with planetary spacecraft. The Deep Space Network uses very large high gain antennas and state of the art receiver systems in order to receive very low-level signals in the 2290-2300 MHz band.

[45] *See* 47 C.F.R. § 25.202(f).

7. International Coordination

36. Until international agreements are completed, WCS operations will be required to protect existing non-U.S. operations in the 2305-2320 and 2345-2360 MHz bands, and WCS operations in the border areas would be subject to coordination with those countries, as appropriate. In addition, satellite DARS operations on WCS spectrum would be subject to international satellite coordination procedures. With regard to this matter, parties should be aware that international coordination could be a complex and lengthy process and could vary significantly depending upon the types of WCS services that are to be provided. International coordination requirements, therefore, should be taken carefully into account in developing business plans for the provision of WCS. This is particularly important for parties contemplating the provisions of WCS in border areas or the provision of satellite DARS operations.[46]

8. RF Safety

37. With regard to RF safety requirements, we propose to treat specific WCS services and devices, operating within the 2305-2320 MHz and 2345-2360 MHz bands, in a comparable manner to other services and devices that have similar operating characteristics. Sections 1.1307(b), 2.1091, and 2.1093 of our rules list the services and devices for which an environmental evaluation must be performed.[47] Accordingly, we propose that an environmental evaluation for RF exposure would be required for the following WCS operations: 1) transmitting terrestrial stations in the satellite DARS service; 2) fixed operations, including base stations and radiolocation, that have an effective radiated power ("ERP") greater than 2000 watts; and, 3) mobile and portable devices[48] that have operating characteristics or functions similar to cellular, PCS or "covered" SMR services, *i.e.*, operations that are typified by long periods of use or are interconnected to the public switched telephone network. We invite comment on this proposal and request suggestions for alternatives that would ensure public safety with respect to exposure to RF radiation.

G. Auction Procedures

38. In accordance with the Appropriations Act, and pursuant to the expedited schedule imposed thereby, we propose below an auction design and pre-auction procedures for the WCS service. Specifically, we propose that the method of competitive bidding be a simultaneous

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[46] Potential satellite DARS applicants should consult the letter from Satellite Engineering Branch dated February 16, 1996 to representatives of Satellite CD Radio and other DARS applicants and responses thereto that address coordination in these bands for satellite DARS. These documents are filed in IB Docket No. 95-91, GEN Docket 90-357, RM No. 8610, PP-24, PP-86, and PP-87.

[47] *See* 47 C.F.R. §§ 1.1301, 1.1307(b), 2.1091, and 2.1093. The RF radiation exposure limits are set forth in 47 C.F.R. §§ 1.1310, 2.1091, and 2.1093, as applicable.

[48] *See* 47 C.F.R. §§ 2.1091(b) and 2.1093(b) for the definitions of "mobile" and "portable" devices.

multiple round electronic auction (if more than one license is offered). We base this proposal on the need to quickly auction the WCS licenses and to promote the efficient use of the spectrum. The Appropriations Act requires the Commission to commence the WCS auction no later than April 15, 1997, and to conduct the auction in a manner that ensures that all proceeds are deposited into the United States Treasury no later than September 30, 1997.

1. Competitive Bidding Design

39. We anticipate conducting the auction for the WCS in conformity with the general competitive bidding rules in Part 1, Subpart Q of the Commission's Rules,[49] and substantially consistent with the auctions that have been employed in other wireless services. In the *Second Report and Order* in the competitive bidding docket,[50] we indicated that we would tailor the design of each auction to fit the characteristics of the licenses to be awarded,[51] and we established criteria for selecting the auction design most appropriate for each particular service. In general, we indicated that the auction procedures chosen for each service should be those that will best promote the policy objectives identified by Congress.[52] We further concluded in the *Second Report and Order* that in most cases the goals set forth in Section 309(j) will be best achieved by designing auctions that award authorizations to the parties that value them most highly. As we explained, such parties are most likely to deploy new technologies and services rapidly, and to promote the development of competition for the provision of those and other services.[53]

40. We propose to adopt the simultaneous multiple round competitive bidding design used in the PCS auctions for the WCS auction. Multiple round bidding should provide more information to bidders than single round bidding during the auction about the values of the licenses. With better information, bidders have less incentive to shade their bids downward in order to avoid the "winner's curse," that is, the tendency for the winner to be the bidder who most overestimates the value of the item being auctioned.[54] Finally, multiple round bidding is likely to be more fair than single round bidding. Every bidder has the opportunity to win if it is willing to pay the most for it. Thus, we tentatively conclude that multiple round bidding would be the best method of auctioning the WCS license or licenses, and we seek comment on this tentative conclusion.

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[49] 47 C.F.R. Part 1, Subpart Q.

[50] *Implementation of Section 309(j) of the Communications Act - Competitive Bidding*, PP Docket No. 93-253, FCC 94-61, *Second Report and Order*, 9 FCC Rcd 2348 (1994) ("*Second Report and Order*").

[51] *Id.* at 2367.

[52] Congress's objectives are, in this instance, set forth in two places: Section 309(j) of the Communications Act (47 U.S.C. § 309(j)) and Section 3001 of the Appropriations Act.

[53] *Second Report and Order*, 9 FCC Rcd at 2360.

[54] *See Second Report and Order*, 9 FCC Rcd at 2362.

41. We also tentatively conclude that, if more than one WCS license is to be awarded, all WCS licenses should be awarded in a single simultaneous multiple round auction. A single simultaneous auction will facilitate any aggregation strategies that bidders may have, and it would provide the most information to bidders about license values at a time that they can best put that information to use. We seek comment on this tentative conclusion.

42. If we adopt simultaneous multiple round bidding as our method of auctioning WCS licenses, we believe that bidding should be allowed only by electronic means. Though oral outcry auctions can be simple and rapid, it is not possible to auction multiple licenses simultaneously in an oral auction. Further, given the potentially large value of the WCS spectrum, we believe that an electronic multiple round auction is preferable because it would permit bidders time between rounds to confer with principals and reassess their valuation models and bidding strategies. This is especially important if more than one license is to be awarded. Thus, we tentatively conclude that electronic bidding would be the best method of submitting bids for this auction. In the event that we decide to use electronic multiple round bidding, we tentatively conclude that this auction should be conducted by remote bidding (by computer) without the option of telephonic bidding. We also propose, however, to reserve the discretion to conduct the WCS auction on-site should circumstances warrant. We seek comment on all of these proposals and tentative conclusions.

2. Bidding Procedures

43. We tentatively conclude that the WCS auction will follow the general competitive bidding procedures of Part 1, Subpart Q. We seek comment on this tentative conclusion.

44. Minimum Opening Bid and Minimum Bid Increments. We also tentatively conclude to reserve the discretion to establish a minimum opening bid for the WCS license or licenses. A minimum opening bid would cause bidders to start bidding at a substantial fraction of the final price of the license or licenses, thus ensuring that the auction proceeds quickly and increasing the likelihood that the public receives fair market value for the license or licenses. We seek comment on this tentative conclusion. In addition, we ask interested parties to suggest the appropriate level of a minimum opening bid for the WCS license or licenses. We also tentatively conclude that the Wireless Bureau should be given discretion to establish, raise and lower minimum bid increments in the course of the auction.[55] We seek comment on this approach.

45. Tie Bids. Where a tie bid occurs, we tentatively conclude that the high bidder should be determined by the order in which the bids were received by the Commission. We request comment on this tentative conclusion.

[55] 47 C.F.R. § 1.2104(d).

3. Procedural and Payment Issues

46. Subpart Q of Part 1 of the Commission's rules also establishes procedural and payment rules for FCC auctions generally, and we tentatively conclude that, with certain modifications proposed below, these rules should apply to the WCS auction. We seek comment on this tentative conclusion.

47. Pre-Auction Application Procedures. Applicants would be required to file a short-form application, FCC Form 175, prior to the auction.[56] In addition, although we have previously allowed for both electronic and manual filing of such applications, we tentatively conclude that we should require electronic filing of all applications for this auction. We believe that electronic filing of applications would serve the best interests of auction participants as well as ensure that the WCS auction will be completed within the time frame mandated under the Appropriations Act. We have developed user-friendly electronic filing software and Internet World Wide Web forms to give applicants the ability to easily and inexpensively file and review applications. This software helps applicants ensure the accuracy of their applications as they are filling them out, and enables them to avoid discovering errors and omissions after the applications are already filed. Particularly in light of the legislative deadline of April 15, 1997, for commencement of this auction, we believe that requiring electronic filing would be helpful to applicants as well as the Commission. By shortening the time required for the Commission to process applications before the auction, electronic filing would increase the lead time available to applicants to pursue business plans and arrange necessary financing before the short-form deadline. We seek comment on these proposals and tentative conclusions.

48. As part of the information provided in the short-form application, we propose to require that an applicant's electronic submission of FCC Form 175 include a certification that the applicant is not in default on any Commission licenses and that it is not delinquent on any extension of credit from any federal agency. In the *Second Report and Order*, we decided that we should require sufficient information on the short-form application to make a determination that "the application is not in violation of Commission rules and that applications not meeting those requirements may be dismissed prior to the competitive bidding."[57] Part of this documentation includes certification that the bidder has the legal, technical, financial, and other qualifications to bid in the auction. A certification regarding defaulted licenses and delinquent payments to federal agencies would enable us to better evaluate the financial qualifications of potential bidders, because it would allow us to determine whether any bidder may later be subject to a monetary judgment or collection procedures that may impair its financial ability to provide service.

[56] *See* 47 C.F.R. § 1.2105(a).

[57] *Second Report and Order*, 9 FCC Rcd at 2375.

49. Upfront Payment. The Part 1 rules require the submission of an upfront payment as a prerequisite to participation in spectrum auctions.[58] We propose to set the amount of the WCS upfront payment based on the general formula we adopted in the Competitive Bidding *Second Report and Order* of $.02 per megahertz per population. We seek comment on this proposal. We also seek comment on alternative methods of establishing an upfront payment, and in particular, on how the Commission may estimate the value of the spectrum to be auctioned.

50. We also propose to require that bidders deposit their upfront payments in our lock-box bank by wire transfer by a date to be announced by public notice. Although in the past we have permitted payment by cashier's check, we believe that requiring wire transfers would benefit bidders by streamlining and expediting the administration of the auction. Our experience has shown that verification of payments remitted to us by cashier's check is time-consuming and cumbersome and requires the allotment of extra processing time prior to the start of the auction. Permitting payment by cashier's check would require that upfront payments be made at an earlier point, which would decrease applicants' lead time to pursue business plans and arrange necessary financing before the start of the auction. In addition, we believe that, given the large number of financial institutions offering wire transfer services, a requirement that bidders remit their upfront payments by wire transfer would result in minimal, if any, extra cost to auction applicants. Such a cost is far outweighed by the benefit of speeding the auction process through quicker verification of payments. We seek comment on this tentative conclusion.

51. Down Payment and Full Payment. We tentatively conclude that to help ensure that auction winners are able to pay the full amount of their bids requires every winning bidder in an auction to tender a down payment sufficient to bring its total amount on deposit with the Commission up to 20 percent of its winning bid.[59] We therefore tentatively conclude that the winning bidder or bidders in the WCS auction should be required to submit a down payment equal to 20 percent of its winning bid within 10 business days after the issuance of a public notice announcing the winning bidder for the license. We seek comment on this tentative conclusion.

52. If a winning bidder makes its down payment in a timely manner, we propose that it file an FCC Form 600 long-form application and follow the long-form application procedures in Section 1.2107.[60] After reviewing the winning bidder's long-form application, and after verifying receipt of the winning bidder's 20 percent down payment, the Commission would announce the application's acceptance for filing, thus triggering the filing window for petitions to deny. Under Section 3001(c) of the Appropriations Act, parties would have five days following public notice

[58] *See* 47 C.F.R. § 1.2106.

[59] *See* 47 C.F.R. § 1.2107(b).

[60] *See* 47 C.F.R. § 1.2107.

that an application was accepted for filing to file a petition to deny.[61] Because Section 3001(c) provides for a period of seven (7) days following such public notice before any licenses may be awarded, we propose to allow three (3) days for parties to file a response to any petition to deny.[62] If, pursuant to Section 309(d) of the Communications Act, the Commission dismissed or denied any and all petitions to deny, the Commission would announce by public notice that it is prepared to award the license, and the winning bidder would then have 10 business days to submit the balance of its winning bid. If the bidder does so, the license would be granted. If the bidder fails to submit the required down payment or the balance of the winning bid or the license is otherwise denied, we would assess a default payment as discussed below. We request comment on these proposals.

53. Amendments and Modifications of Applications. To encourage maximum bidder participation, we propose to allow applicants to amend or modify their short-form applications as provided in Section 1.2105.[63] In the broadband PCS context, we modified our rules to permit ownership changes that result when consortium investors drop out of bidding consortia, even if control of the consortium changes due to this restructuring.[64] We propose to adopt the same exception to our rule prohibiting major amendments in the WCS auction. We seek comment on all of this proposal.

54. Bid Withdrawal, Default and Disqualification. We tentatively conclude that the withdrawal, default, and disqualification rules for the WCS auction should be based upon the procedures established in our general competitive bidding rules. With regard to bids which are submitted in error, we propose to apply the guidelines which we recently fashioned to provide for relief from the bid withdrawal payment requirements under certain circumstances.[65]

4. Regulatory Safeguards

55. Anti-Collusion. In the *Second Report and Order*, we adopted anti-collusion rules in connection with competitive bidding, explaining that these rules, which are codified at 47 C.F.R. § 1.2105, would enhance the competitiveness of both the auction process and the post-auction

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[61] *See* Appropriations Act, § 3001(c).

[62] *Id.*

[63] 47 C.F.R. § 1.2105.

[64] *See Implementation of Section 309(j) of the Communications Act - Competitive Bidding*, PP Docket No. 93-253, *Fourth Memorandum Opinion and Order*, 9 FCC Rcd 6858, 6868 (1994).

[65] *See* Atlanta Trucking Associates, Inc. and MAP Wireless L.L.C. Requests to Waive Bid Withdrawal Payment Provisions, *Order*, FCC 96-203 (May 3, 1996), *recon. pending*. *See also* Georgia Independent PCS Corporation Request to Waive Bid Withdrawal Payment Provision, *Order*, DA 96-706 (May 6, 1996), *app. rev. pending*.

market structure.[66] We propose to apply these same rules to the auction of the WCS spectrum.

56. Performance Requirements. In implementing auction procedures, the Commission is required under Section 309(j) of the Communications Act to include "safeguards to protect the public interest in the use of the spectrum" and performance requirements "to ensure prompt delivery of service to rural areas, to prevent stockpiling or warehousing of spectrum by licensees or permittees, and to promote investment in and rapid deployment of new technologies and services."[67] We have previously found that these objectives could be satisfied through build-out requirements (*see, e.g., Implementation of Section 309(j) of the Communications Act -- Competitive Bidding, Fifth Report and Order*, PP Docket No. 93-253, FCC 94-178, 9 FCC Rcd 5532, 5570 (1994); *Amendment of Parts 21 and 74 of the Commission's Rules With Regard to Filing Procedures in the Multipoint Distribution Service and in the Instructional Television Fixed Service and Implementation of Section 309(j) of the Communications Act - Competitive Bidding, Report and Order*, PP Docket No. 93-253 and MM Docket No. 94-131, FCC 95-230, 10 FCC Rcd 9589, 9659-60 (1995); *Allocation of Spectrum Below 5 GHz Transferred from Federal Government Use, Second Report and Order*, ET Docket No. 94-32, FCC 95-319, 11 FCC Rcd 624, 669-670 (1995)). We note, however, that we have never concluded that such requirements are mandated by Section 309(j).

57. Build-out requirements may encourage the provision of service to areas that would not necessarily receive service expeditiously solely through the operation of market forces. In addition, build-out requirements may also prevent stockpiling or warehousing of spectrum by allowing licenses to be recovered and made available to entities more willing and able to provide service expeditiously. As is discussed below, however, we have some concern as to whether applying these requirements to the licenses of the WCS spectrum is the best way to address Congress's concerns.

58. In this NPRM, we propose that a WCS licensee have the flexibility to offer a range of services, rather than being restricted to a particular use. *See* para. 9, *supra*. Given the broad range of services that may be deployed over WCS spectrum, it may be that performance requirements in the form of construction benchmarks are not necessary to meet Section 309(j)'s objectives regarding warehousing and rapid deployment. Where we allow flexible use and the ultimate use (or uses) of a license is uncertain, simply requiring construction by itself does not sufficiently encourage the licensee to deploy assets in any particular market (*e.g.*, the voice or data market) or to provide any particular service. In addition, requiring construction by itself does not ensure that licenses are put to use in an efficient and procompetitive manner. Moreover,

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[66] *See* 47 C.F.R. § 1.2105(c). *See also Second Report and Order*, 9 FCC Rcd at 2386-88; *Second Memorandum Opinion and Order*, 9 FCC Rcd 7245 at 7253-7254; *Erratum*, Mimeo No. 50278 (October 19, 1994); "Wireless Telecommunications Bureau Clarifies Spectrum Auction Anti-Collusion Rules," *Public Notice*, DA 95-2244 (rel. October 26, 1995); "Wireless Telecommunications Bureau Ponders Guidance on the Anti-Collusion Rule for D, E and F Block Bidders," *Public Notice*, DA 96-1460 (rel. August 28, 1996).

[67] 47 U.S.C. § 309(j)(4)(B).